

## WHAT IS CLAIMED IS:

1. A method of liquid molding, the method comprising the steps of:  
providing a mold having a face, a top portion, first and second sides, and first and  
5 second ends, the mold having injection ports on both sides and ends;  
providing multiple independently fed subsurface inserts;  
applying plies to the mold;  
attaching fabric end caps onto aluminum mandrels;  
sliding braided sleeves over the mandrels;  
10 positioning the mandrels over the bottom portion;  
placing braided material along mandrel radius interfaces;  
placing the face to the top portion;  
attaching root, tip, and slide closure plates to the mold;  
inserting the mold into a restraining fixture;  
15 inserting metal wedges into the fixture;  
attaching a steel box to the mold and the fixture;  
connecting resin injection and vacuum lines to the mold;  
injecting degassed resin through heated tubing; and,  
activating the inserts.  
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2. A method for liquid molding, the method comprising the steps of:  
providing an associated mold;  
providing at least one independently fed subsurface insert;  
wetting fabric through the mold; and,  
25 activating the at least one insert.
3. The method of claim 2, wherein the method further comprises the  
step of:  
manually controlling the venting.

4. The method of claim 2, wherein the method further comprises the step of:

controlling the venting via a computerized injection and venting process.

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5. A composite resin mold, the mold comprising:

a body;

at least one injection port;

at least one resin track; and,

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at least one independently fed subsurface insert.

6. The mold of claim 5, wherein the mold has multiple injection ports and multiple channels.

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7. The mold of claim 5, wherein the at least one independently fed subsurface insert is multiple inserts, the mold further comprising:

a top portion;

a face, the inserts being located in vent pockets;

at least one vent;

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first, second, third, and fourth side portions; and,

vent openings, the vent openings being of a size to restrict entry of associated fabric.

8. The mold of claim 7, wherein the at least one injection port is independently fed.

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9. The mold of claim 8, wherein the mold further comprises:

an adapter plate;

a retaining bolt; and,

an o-ring.

10. The mold of claim 9, wherein the mold further comprises:  
a vent pocket for receiving the insert, the insert contoured to fit the mold face.

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11. The mold of claim 5, wherein the mold further comprises the resin  
track being located circumferentially around the venting insert.

12. The mold of claim 11, wherein the vent extends upwardly from the  
10 resin track.

13. A venting insert for use with liquid infusion molds, the insert  
comprising:

an independently fed vent;  
15 a resin track, the resin track located substantially circumferentially around the  
vent; and,  
suction means for creating suction.

14. The insert of claim 13, wherein the insert further comprises:  
20 an injection port opening.

15. The insert of claim 14, wherein the vent is connected to the resin  
track and the vent extends upwardly from the resin track.

16. The insert of claim 15, wherein the insert further comprises:  
25 o-rings for connecting the insert to an associated mold.

17. The mold of claim 5, wherein the mold further comprises:  
at least one vent pocket.

18. The mold of claim 17, wherein the mold further comprises multiple vent pockets, the vent pockets being inset in the surface of the mold.

5 19. The method of claim 2, wherein the method further comprises the steps of :

alternating at least the one independently fed subsurface insert; and,  
alternating operation of an injection port.

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